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REMARKS

Claim 1 has been amended to distinguish over the Bennett reference cited by the Examiner. Claims 1-8 remain in this application and stand for examination. Reconsideration and reexamination are requested in view of the comments made hereinafter.

Objection to the Drawings

Applicant notes the Examiner's comments as to the drawing informality. Applicant advises that the drawings are intended to be replaced with formal drawings upon allowance of this application.

Rejection of claims 1-8 for obviousness

The Examiner rejects claims 1-8 under 35 U.S.C. 103(a) as being obvious in view of Nutten et al United States Patent 3,428,406 in view of Reichhelm United States Patent 3,361,183 and further in view of Bennett United States Patent 4,061,463.

The Examiner correctly notes that "...Nutten does not disclose a manual metering valve interposed between the liquid fuel supply and [the] air aspirated nozzle which is adjustable during operation of the burner or that the burner is an infrared burner...". The Examiner further and correctly notes that Reichhelm teaches a liquid fuel burner which "...includes manual air control (34) and liquid fuel control 22 valves...". Neither does Reichhelm include a metering valve as has been previously set forth. Neither reference is concerned with adjustable BTU output which requires a metering valve.

The Bennett reference has not been previously discussed. It is a complicated device, with the objective being to be able to use two fuels, namely natural gas as a first fuel and a liquid fuel as a second fuel. But Bennett is not able to use liquid fuel without an added heated gas downstream from the

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nozzle. This is so because Bennett's burners 2 are located some distance from his nozzle 10. Liquid fuel will condense as the distance from the nozzle increases and Bennett teaches ceramic burners 2 which are located some distance from his nozzle 10. To maintain the temperature of the fuel and air travelling in the conduit 8 and the manifold 6 to the burners 2, Bennett withdraws heated gases from the enclosure 1 and recirculates those heated gases to the fuel and air mixture downstream from the nozzle 10. This higher temperature will maintain the air and fuel in vapor form and prevent condensation of the fuel and air vapor before reaching the burners which would make the Bennett apparatus inoperable.

In contradistinction, the present invention allows combustion to take place immediately downstream from the nozzle 120 (Figure 14). This combustion configuration allows the temperature of the bases and fuel to be maintained in vapor form which allows continuing combustion.

To appropriately distinguish over Bennett, it is now provided in the claims that the combustion takes place within a burner immediately adjacent to the nozzle. This clearly and patentably distinguishes over the Bennett apparatus.

The Examiner's comments made at page 5 of the action are noted. Applicant advises, with respect, that contrary to the Examiner's statement that Reichhelm teaches proportioning of the air and fuel flow, applicant does not proportion such flow. The air is left at a single flow setting and is not varied. The air is always supplied at the same pressure in the infrared burner according to the present invention.

Reconsideration and allowance of claims 1-8 are solicited.

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Respectfully submitted,

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